Chicken, a newly identified risk factor for sporadic *Salmonella* serotype Enteritidis infections in the United States: A case-control study in FoodNet sites

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Background: Since the 1980s *Salmonella* Enteritidis (SE) infections in the United States (U.S.) have increased dramatically. Disease outbreaks and sporadic illness have been associated with eating undercooked eggs.

Methods: We conducted a population-based case-control study in five Foodborne Diseases Active Surveillance Network (FoodNet) sites (CA, CT, GA, MN, and OR) in 1996-1997. Cases were identified via active laboratory-based surveillance; patients were interviewed about exposures during the 5 days before illness onset. Controls matched by age and neighborhood were interviewed about exposures during the same 5-day period.

Results: During the l2-month study, 182 patients and 345 controls were interviewed. Thirty (18%) of 182 cases versus 1 (0.3%) of 344 controls traveled outside the U.S. [matched odds ratio (mOR)=61; 95% confidence interval (CI)=3.0447.0]. Also, among those who did not travel outside the U.S., illness was associated with eating runny eggs outside the home [mOR=2.8; 95% CI=1.4-5.7], and eating chicken outside the home [mOR=2.5; 95% CI=1.6-4.0]. In multivariate analysis, however, eating chicken outside the home remained the only significant risk factor for illness [mOR=2.l; 95% CI=1.2-3.4] among those who did not travel outside the U.S. The population-attributable risk of SE infection associated with eating chicken outside the home among people who did not travel outside the U.S. was 25%.

Conclusion: Consumption of chicken has not previously been associated with SE infection in the U.S., although it is commonly associated in Europe. Further studies are needed to determine If SE has been introduced into broiler flocks in the U.S. Measures to prevent SE infections should include educating international travelers about food safety, educating food handlers about proper handling and cooking of poultry products, and implementing interventions to reduce contamination, in particular, irradiation of raw poultry.

Suggested citation:

Kimura A, Reddy S, Marcus R, Cieslak P, Mohle-Boetani, Kassenborg H, Segler S, Swerdlow D, and the FoodNet Working Group. Chicken, a newly identified risk factor for sporadic *Salmonella* serotype Enteritidis infections in the United States: A case-control study in FoodNet sites. 36th Annual Meeting of the Infectious Diseases Society of America. Denver, CO, November 1998.